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(FILE 'HOME' ENTERED AT 14:24:42 ON 25 SEP 2000)

FILE 'CAPLUS' ENTERED AT 14:24:46 ON 25 SEP 2000
E SOMMERMEYER KLAUS/IN,AU

L1 37 S E2-4
L2 81 S HENNING KLAUS/IN,AU
 E HENNING KLAUS/IN,AU
L3 81 S E3-4
L4 0 S GORG MICHAEL/IN,AU
 E GORG MICHAEL/IN,AU
 E GORG M/IN,AU
 E MAUL THOMAS/IN,AU
L5 1 S E3-4
L6 1 S L1 AND L3 AND L5
 E GOERG MICHAEL/IN,AU
L7 2 S E3-4
L8 1 S L1 AND L3 AND L5 AND L7
L9 112 S L1 OR L3 OR L5 OR L7
L10 84141 S STARCH
L11 13 S L9 AND L10
L12 12 S L11 NOT L8

L6 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1999:116661 CAPLUS
 DOCUMENT NUMBER: 130:169771
 TITLE: Method and apparatus for continuous preparation of hydrolyzed, optionally substituted starches and their use
 INVENTOR(S): Sommermeyer, Klaus; Henning, Klaus; Goerg, Michael; Maul, Thomas
 PATENT ASSIGNEE(S): Fresenius A.-G., Germany
 SOURCE: Ger., 6 pp.
 CODEN: GWXXAW
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19744353	C1	19990211	DE 1997-19744353	19971008
WO 9907743	A1	19990218	WO 1998-EP5011	19980807
W: BR, CA, CN, MX, NO, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1001993	A1	20000524	EP 1998-946298	19980807
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
NO 2000000636	A	20000208	NO 2000-636	20000208
PRIORITY APPLN. INFO.: DE 1997-19734370 19970808				
DE 1997-19744353 19971008				
WO 1998-EP5011 19980807				

AB In the title process, which is economical and gives products with controlled properties, useful in medicine and in foods (no data), an aq. suspension of starch is fed continuously by gravity, essentially without mixing, to the hydrolysis stage and hydrolysis is interrupted at the desired degree by neutralization. A block diagram of the process and app. is included.

L12 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1998:548684 CAPLUS
 DOCUMENT NUMBER: 129:150312
 TITLE: The reaction of starch and ethylene oxide giving hydroxyethyl starch (HES) can be controlled by near infra-red spectroscopy (NIR)
 AUTHOR(S): Hildebrand, Ulrich; Cech, Franz; Sommermeyer, Klaus
 CORPORATE SOURCE: Fresenius A.-G., Friedberg, D-61169, Germany
 SOURCE: Starch/Staerke (1998), 50(7), 306-309
 CODEN: STARDD; ISSN: 0038-9056
 PUBLISHER: Wiley-VCH Verlag GmbH
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 AB The controlled parameter is the molar substitution (MS), which is measured by means of a probe directly from the neutralized and filtered reaction soln. According to the type of HES (200/0.5, 130/0.4, or 50/0.2) the measured MS depends on the concn. of HES in the soln. To prevent distorted results the content of HES 130/0.4 and HES 50/0.2 must be adjusted to 25% (w/v) for this individual calibration. Only in the case of HES 200/0.5 the concn. can vary between 19-29% for measuring the MS. NaCl as a byproduct of the process does not effect the measurement . It is req. 10% NaCl in the sample. The temp. of the soln. does not influence the result significantly (in the range of 20-34 degree.). The reproducibility of the MS detn. is good. The day-to-day std. deviation of 25 repetitions is +/- 0.005 for a sample with MS = 0.405. Nevertheless the biggest problem for the detn. of MS by NIR is ethylene glycol (EG), the most important byproduct of the reaction. If the concn. of EG differs significantly from that in the calibration samples, the calibration of the method must be revised.

L12 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1996:268328 CAPLUS
 DOCUMENT NUMBER: 124:292796
 TITLE: Process for manufacture of starch decomposition products
 INVENTOR(S): Sommermeyer, Klaus; Goerg, Michael; Henning, Klaus
 PATENT ASSIGNEE(S): Fresenius Ag, Germany
 SOURCE: Ger. Offen., 6 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4434877	A1	19960404	DE 1994-4434877	19940929
WO 9610042	A1	19960404	WO 1995-EP3806	19950926

W: AU, BR, BY, CA, CN, CZ, EE, FI, HU, JP, KR, LT, MX, NO, NZ, PL,

RO, SI, SK, UA, US
 RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
 CA 2201355 AA 19960404 CA 1995-2201355 19950926
 AU 9537424 A1 19960419 AU 1995-37424 19950926
 EP 783528 A1 19970716 EP 1995-935380 19950926
 EP 783528 B1 19980812
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
 SE
 CN 1161045 A 19971001 CN 1995-195412 19950926
 JP 10506425 T2 19980623 JP 1995-511373 19950926
 BR 9509095 A 19980623 BR 1995-9095 19950926
 HU 77721 A2 19980728 HU 1998-753 19950926
 AT 169641 E 19980815 AT 1995-935380 19950926
 ES 2122686 T3 19981216 ES 1995-935380 19950926
 ZA 9508157 A 19960509 ZA 1995-8157 19950929
 NO 9701323 A 19970321 NO 1997-1323 19970321
 FI 9701293 A 19970401 FI 1997-1293 19970326
 US 5945528 A 19990831 US 1997-809362 19970515
 PRIORITY APPLN. INFO.: DE 1994-4434877 19940929
 WO 1995-EP3806 19950926

AB The manuf. of **starch** (I) decompn. products in high yield with a narrow mol. wt. distribution by treatment of I or I derivs. by high-pressure homogenization is described. Thus, partially decompd. wax maize I, with an av. mol. wt. of 2,689,000 Da, was reacted with ethylene oxide to give hydroxyethyl **starch** (II). A 15 wt.% soln. of II in un-purified form was homogenized at 50-70.degree. and 1600 bar for 10 times in a high-pressure homogenizer to give a product with a wt. av. mol. wt. of .apprx.670,300 Da.

L12 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1993:59974 CAPLUS
 DOCUMENT NUMBER: 118:59974
 TITLE: Systematic GC/MS analysis of 1,2-O-ethyleneglucose derivatives in hydrolyzates of hydroxyethyl

starch

AUTHOR(S): Hildebrand, Ulrich; Cech, Franz; Rupp, Daniela;
Sommermeyer, Klaus

CORPORATE SOURCE: Chem. Pharm. Forsch. Entwickl., Fresenius AG,
 Oberursel, 6370, Germany

SOURCE: Starch/Staerke (1992), 44(11), 426-33
 CODEN: STARDD; ISSN: 0038-9056

DOCUMENT TYPE: Journal
 LANGUAGE: German

AB Sixteen 1,2-O-ethylene-D-glucose derivs. were identified in hydrolyzates of hydroxyethyl **starch** by gas chromatog.-mass spectrometry after persilylation. Besides the common MS fragments of silylated compds. four significant fragments of the bicyclic intramol. glucosidation products of monocyclic (2-O-hydroxyethyl)glucose derivs. were found: m/z 86, 127, 229 and 277. These ions allow identification of trimethylsilylated 1,2-O-ethyleneglucose derivs. in a complex mixt. as well as the differentiation of isomers and anomers. The typical fragmentation pattern of trimethylsilyl-1,2-O-ethyleneglucose derivs. is described and is verified by the study of the corresponding acetyl derivs.

ACCESSION NUMBER: 1992:658266 CAPLUS
 DOCUMENT NUMBER: 117:258266
 TITLE: Moistening composition for the oropharyngeal mucosa containing hydroxyethyl starch
 INVENTOR(S): Sommermeyer, Klaus; Mueller, Hans Joerg
 PATENT ASSIGNEE(S): Fresenius AG, Germany
 SOURCE: Ger. Offen., 3 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4113684	A1	19921029	DE 1991-4113684	19910426
AB	The title compn. is useful as an artificial saliva for patients with defective saliva secretion, sialadenitis, etc. Use of hydroxyethylstarch to increase the viscosity eliminates the problem of formation of a film or coating on the mucosa which occurs with prior art compns. contg. CM-cellulose. Thus, an oral spray contained H2O 40.696, K2HPO4 0.017, sorbic acid 0.025, BzONa 0.030, high-mol.-wt. hydroxyethyl starch 4.092, sorbitol 1.523, KCl 0.061, NaCl 0.043, MgCl2.6H2O 0.003, CaCl2.2H2O 0.007, lemon essence 0.700, D-pantthenol 2.538, and CO2 (propellant) 1.015 g/spray dose.			

L12 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1992:537593 CAPLUS
 DOCUMENT NUMBER: 117:137593
 TITLE: Fine structure and hyperfine structure of clinically applied hydroxyethyl starch
 AUTHOR(S): Sommermeyer, Klaus; Hildebrand, Ulrich; Cech, Franz; Pfitzer, Edith; Henning, Klaus; Weidler, Burghard
 CORPORATE SOURCE: Fresenius AG, Oberursel, 6370, Germany
 SOURCE: Starch/Staerke (1992), 44(5), 173-9
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 AB The Mark-Houwink-relations for different samples of clin. used hydroxyethyl starches were established by multi-detection HPGPC. In combination with the degree of branching, the degrees of substitution DS and the molar substitution MS for the different mol. regions were measured by gas chromatog. methylation anal. Within the mol. regions of nonreducing anhydroglucose units, branching units and linear units characteristic differences were found.. For hydroxyethyl starches which were prep'd. from enzymically hydrolyzed waxy corn starch by .alpha.-Amylase, a significantly higher degree of branching was found than for samples prep'd. by acid hydrolysis. The clin. relevance of these results is discussed.

L12 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 1992:451188 CAPLUS
 DOCUMENT NUMBER: 117:51188
 TITLE: Chromatographic studies on the polydispersity of

AUTHOR(S): hydroxyethyl starch
Sommermeyer, Klaus; Cech, Franz; Hildebrand, Ulrich; Pfitzer, Edith; Baumbach, Cornelia Oberursel, Germany

CORPORATE SOURCE: Starch/Staerke (1992), 44(6), 215-18

SOURCE: CODEN: STARDD; ISSN: 0038-9056

DOCUMENT TYPE: Journal

LANGUAGE: German

AB A representative sample of clin. used hydroxyethyl starch was sepd. by semipreparative high-pressure gel permeation chromatog. (HPGPC) into narrow fractions in the range of approx. 3000 to 800,000.

The original sample and selected fractions were characterized by gas chromatog. methylation anal. according to their substitution degrees MS and DS, which were differentiated by the substitution positions at C2, C3 and C6 of the anhydroglucoses and their kind of glycosidic bonding .alpha.-1, .alpha.-1, 4 or .alpha.-1,4,6, resp. Furthermore, polydispersity in relations to the degree of branching was detd. Mark-Houwink and mol.-wt. distribution parameters detd. by multi-detection HPGPC are reported. The presented data demonstrated an extensive homogeneity of the original sample. The clin. relevance is discussed.

L12 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1992:176417 CAPLUS

DOCUMENT NUMBER: 116:176417

TITLE: Characterization of polymers by size exclusion chromatography using multiple detection. Investigations on the determination of structural differences of hydroxyethyl starches

AUTHOR(S): **Sommermeyer, K.**; Cech, F.; Pfitzer, E.; Roessler, K.

CORPORATE SOURCE: Pharm. Div., Fresenius A.-G., Oberursel/Taunus, 6370, Germany

SOURCE: Chromatographia (1992), 33(3-4), 151-3

CODEN: CHRGB7; ISSN: 0009-5893

DOCUMENT TYPE: Journal

LANGUAGE: English

AB An aq. size-exclusion chromatog. system was outlined using dual detection by a multi-angle laser light scattering photometer and a concn. detector. The differences in the radii of gyration at the same mol. wt. of two hydroxyethyl starches with different mol. structure were presented. The detn. of the Mark-Houwink relation for these polymers led to a qual. similar result.

L12 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1991:464034 CAPLUS

DOCUMENT NUMBER: 115:64034

TITLE: Pharmacokinetic parameters as criteria for clinical use of hydroxyethyl starch preparations

AUTHOR(S): Weidler, B.; Von Bormann, B.; **Sommermeyer, K.**; Lohmann, E.; Peil, J.; Hempelmann, G.

CORPORATE SOURCE: Abt. Anaesthesiol. Oper. Intensivmed., Justus-Liebig-Univ., Giessen, W-6300, Fed. Rep. Ger.

SOURCE: Arzneim.-Forsch. (1991), 41(5), 494-8

CODEN: ARZNAD; ISSN: 0004-4172

DOCUMENT TYPE: Journal

LANGUAGE: German

AB The pharmacokinetics of 2 com. hydroxyethyl **starch** prepns., differing only slightly in their pharmaceutical descriptions, were detd. in volunteers. Significant differences were found, related not only to the degree of substitution but also to the position of the hydroxyethyl groups on the anhydroglucose skeleton. The C2/C6 hydroxyethylation ratio seemed to be the most significant for detg. whether the **starch** would be slow- or long-acting when used for plasma replacement/hemodiln. Such data should be included in the pharmaceutical specifications for hydroxyethyl **starch**, because the differences may det. clin. use and efficacy.

L12 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1991:435717 CAPLUS

DOCUMENT NUMBER: 115:35717

TITLE: Pharmaceutical formulations containing nonhygroscopic carnitine mandelate

INVENTOR(S): Sommermeyer, Klaus; Henning, Klaus

PATENT ASSIGNEE(S): Fresenius A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 3 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3841664	A1	19901011	DE 1988-3841664	19881210

AB L-Carnitine D-(-)-mandelate (I) is a nonhygroscopic carnitine salt usable in drug formulations. I was prep'd. by lyophilizing a soln. of 8 g L-carnitine and 7.64 g D-(-)-mandelic acid in 40 mL water. Tablets comprised I 250, **starch** 40, talc 15, and Mg stearate 5 mg.

L12 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1991:124846 CAPLUS

DOCUMENT NUMBER: 114:124846

TITLE: Hydroxyethyl **starch** as plasma expander and its preparation

INVENTOR(S): Sommermeyer, Klaus; Cech, Franz; Weidler, Burghard; Henning, Klaus

PATENT ASSIGNEE(S): Fresenius A.-G., Fed. Rep. Ger.

SOURCE: Eur. Pat. Appl., 6 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 402724	A1	19901219	EP 1990-110531	19900602
EP 402724	B1	19960214		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
DE 3919729	A1	19901220	DE 1989-3919729	19890616
DE 3919729	C2	19920326		
DE 3919729	C3	19970619		

AT 134196	E	19960215	AT 1990-110531	19900602
ES 2082800	T3	19960401	ES 1990-110531	19900602
US 5218108	A	19930608	US 1990-533294	19900605
JP 03026701	A2	19910205	JP 1990-156633	19900614

PRIORITY APPLN. INFO.:

AB Hydroxyethyl **starch** (I) which is degraded in a physiol. reasonable time with no residues is prep'd. by prehydrolysis of amylopectin-rich **starch**, hydroxyethylation to degree of substitution (DS) 0.15-0.5, and hydrolysis to mol. wt. (6-60) .times.

104,

giving I with ratio of C-2 substitution to C-6 substitution 8-20:1. **Starch** was washed and partially acetalized with MeOH, solvated with 1% methanolic HCl at 40.degree. until the mol. wt. was 900,000, washed with 0.1 N NaOH, hydroxyethylated in 1 N NaOH at 20.degree. and pH .gtoreq.12, with 2-chloroethanol (0.77 mol/2.58 mol **starch**), hydrolyzed with HCl, and subjected to ultrafiltration to give I with mol. wt. 234,000 and D.S. 0.26. Complete hydrolysis gave glucose 81.2%, 2-, 3-, and 6-hydroxyethyl glucose 12.42, 2.70, and 1.33%, resp., and bis(hydroxyethyl) glucose isomers 1.04%.

L12 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1988:101348 CAPLUS

DOCUMENT NUMBER: 108:101348

TITLE: Use of tryptophan-containing oligopeptides for treatment of cerebral disorders

INVENTOR(S): Sommermeyer, Klaus; Weidler, Burghard

PATENT ASSIGNEE(S): Fresenius A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 6 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3601398	A1	19870723	DE 1986-3601398	19860118
EP 234186	A1	19870902	EP 1987-100072	19870106
EP 234186	B1	19911106		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 69163	E	19911115	AT 1987-100072	19870106
ES 2038603	T3	19930801	ES 1987-100072	19870106
US 4849408	A	19890718	US 1987-1517	19870107
JP 62169730	A2	19870725	JP 1987-4217	19870113
PRIORITY APPLN. INFO.:			DE 1986-3601398	19860118
			EP 1987-100072	19870106

AB Oligopeptides contg. .gtoreq.1 L-tryptophan or L-tryptophan-derived amino acid are used for treatment of cerebral disorders, esp. insomnia and depression. Tablets were manufd. to contain L-Ala-L-Trp 1500, corn **starch** 100, alginic acid 10, and Me stearate 10 parts, all ingredients except the Mg stearate being mixed with aq. 15% corn **starch** paste and granulated and sieved before the Mg stearate addn. and tablet pressing.

L12 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1982:168750 CAPLUS

DOCUMENT NUMBER: 96:168750

TITLE: Blood substitute containing hemoglobin
 INVENTOR(S): Pitz, Heiner; **Sommermeyer, Klaus**
 PATENT ASSIGNEE(S): Fresenius, Dr. Eduard, Chemischpharmazeutische
 Industrie K.-G., Fed. Rep. Ger.
 SOURCE: Ger. Offen., 26 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3029307	A1	19820304	DE 1980-3029307	19800801
DE 3029307	C2	19891207		

AB A blood substitute consists of cell-free Hb bound to a polysaccharide by way of reactive groups and a bridging ligand. The polysaccharide is preferably dextran or hydroxyethyl **starch** with a mol. wt. of 10,000-500,000. The bridge is a C3-14 unsatd. aliph. or C14 or less cycloalkyl or aryl group. Thus, dextran or hydroxyethyl **starch** was oxidized with NaIO₄, dialyzed, and treated with 2M ethylenediamine at pH 5, stirred for 6-10 h, mixed with tris(hydroxymethyl)methyl-2-aminoethanesulfonic acid to block excess aldehyde groups, dialyzed, adjusted to pH 7.5 and a phosphate concn. of 0.5M with solid KH₂PO₄ and Na₂HPO₄, and stirred with 25% aq. glutardialdehyde for 18 h at 37.degree., followed by dialysis to remove the excess. The soln. was treated with human Hb in pH 9.5 0.2M bicarbonate buffer at 5.degree., filtered, ultrafiltered, and freeze-dried.